

## Red Cross blood drive set at ORNL August 2



**VITAL 10 MINUTES**—It takes about 10 minutes for an actual donation of blood. Using the natural flow of gravity, the American Red Cross processes blood for use in hospitals all over the country. Here, a registered nurse begins the actual drawing of blood.

### Corporate world of Union Carbide

A multi-million dollar expansion program to double available production capacity of ethylene-ethyl acrylate (EEA) polyethylene copolymers at its petrochemical plant at Penuelas, Puerto Rico, has been announced by Union Carbide Caribe Inc., wholly-owned subsidiary of Union Carbide Corporation. Scheduled for completion in August 1978, the expansion will boost total EEA copolymer capacity at the Penuelas facility to 140 million pounds a year.

Union Carbide said that the expansion is prompted by increasing demand for EEA copolymers in several markets and reinforces the worldwide commitment of Union Carbide and its affiliates to the business. Additional EEA copolymer production facilities are operated by foreign affiliates of Union Carbide in Japan and Belgium, where a new unit will come on stream in late 1978.

EEA copolymers are widely used in production of housewares, toys, tubing, flexible hose, gaskets, extrusion coatings and hot-melt

adhesives. In such applications, they compete successfully with ethylene vinyl acetate, polyvinyl chloride and thermoplastic elastomers.

### In mail. . .

#### Carbide Dental Plan booklet issued

Corporate Benefit Plans has issued a revised booklet for the Dental Assistance Plan. Nuclear Division employees will be receiving copies of the booklet this month. The plan described in the booklet has not been changed, but new booklets are required by federal regulations.

When it is received, this booklet should be inserted in your Benefit Plans binder.

New booklets describing the Pension Plan, Savings Plan, Hospital-Surgical Plan, and Major and Special Medical Plans are still to come. They will be issued later this year.

ORNL employees are rolling up their sleeves for the big blood drive on Wednesday, August 2. The American Red Cross will make its first visit to Oak Ridge facilities to draw blood during regular business hours.

The site will be in Building 2518 between the hours of 9 a.m. and 3 p.m. Scheduling will be through divisional representatives.

The Red Cross's visit will assure all ORNL families of ample coverage for blood needs, regardless of their place of residence.

Every eight minutes, a hospitalized patient needs a blood transfusion. The immediate availability of that person's blood type, when it is needed, can make the difference between life and death. What better reason is there to give blood? This does not count the thousands of units of blood used in elective surgery, blue baby transfusion, and accident victims.

The drive at ORNL is patterned after the successful blood program in the Paducah Plant, where more than 36 percent of the plant's population is signed for regular donations.

A donation on August 2 is a convenient way to give needed blood. Employees and staff members are urged to schedule through divisional coordinators so that the flow of donors will be uniform. Actual donation of the blood takes about 10 minutes, but a lot of screening and testing must be done. Also, about a 20-minute pause is required at the refreshment canteen for the donor to recuperate his fluid loss. A registered nurse takes the blood, and a plant physician is also on call. (The body replaces the liquid loss of the blood almost immediately. . . cells and minerals are replenished in 10 days to two weeks. You can trust Mother Nature on this one! Experts estimate the energy loss as compared to the exertion required for a brisk half-mile walk.)

Grover C. Cain and Norman L. Beeler have been named co-chairmen for the drive at ORNL, and have appointed the following

chairmen from each division who will coordinate appointments and solicit donors:

#### Analytical Chemistry

George R. Wilson  
Ext. 3-1559

#### Chemical Technology

John B. Ruch  
Ext. 3-6876

#### Chemistry

Charles E. Haynes  
Ext. 3-1982

#### Computer Sciences

Nancy A. Betz  
Ext. 3-1709

#### Central Management

Grover C. Cain  
Ext. 3-6606

#### Employee Relations

James A. Holloway Jr.  
Ext. 3-6921

#### Energy

Ralph E. Greene  
Ext. 3-1423

#### Engineering

Harold F. Hartman  
Ext. 3-0321

#### Environmental Sciences

Marvin H. Shanks  
Ext. 3-6233

#### Finance & Materials

John R. Jones  
Ext. 3-6426

#### Health Division

Walter E. Porter  
Ext. 3-1634

#### Health & Safety Research

David V. Woo  
Ext. 3-1694

#### Industrial Safety, Applied Health Physics

Denton C. Gary  
Ext. 3-6078

#### Information

Joe L. Rich  
Ext. 3-6400

#### Instrumentation & Controls

Richard A. Crowell  
Ext. 3-1537

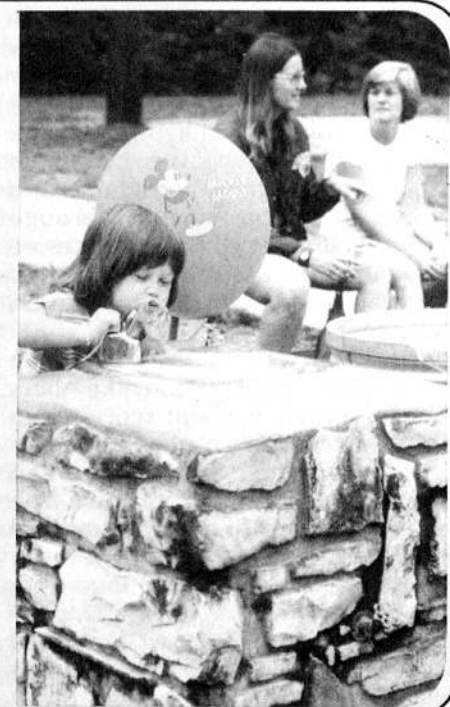
(Please see page 8)

### in this issue. . .

Two hundred years ago, George Washington, an engineer himself, called his profession to help build a new nation. Marking the occasion, our own Engineering Division staged a picnic at Clark Center Recreation Park. They all came, children and all, as seen in photos on pages 4 and 5.

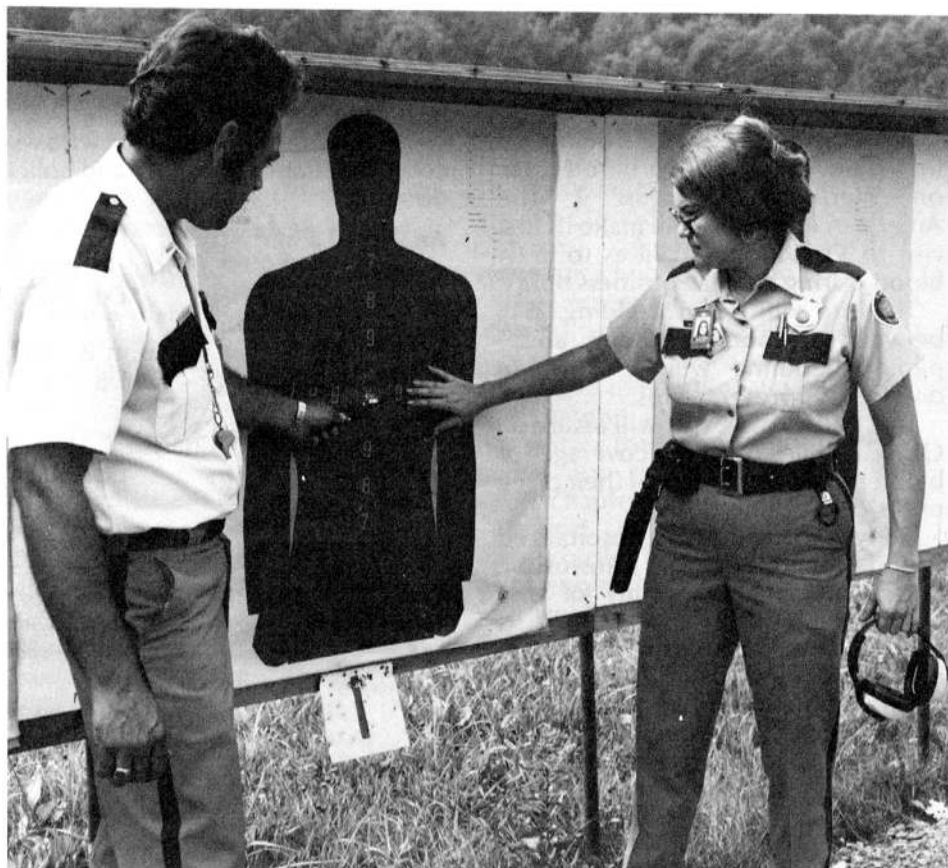
#### Other features:

- Question Box..... page 2
- Boch to Fusion..... page 3
- Medicine Chest..... page 5
- Promotions..... page 7





# Governor's 20 shooters boast two from ORGDP



*INSPECT RESULTS—Terri Littleton and Lieutenant Bob Allen, the firearms instructor at ORGDP, review a series of shots that were fired at the silhouette.*

Two members of the ORGDP Plant Protection Department, Lt. Bob Allen and Guard Terri Littleton, were named to the "Governor's 20" for 1977. Each year the "Governor's 20" recognizes the top 20 "combat shooters" among Tennessee law enforcement officials. Both received certificates during the Tennessee Law Enforcement Officers Association's annual meeting and competition in Knoxville last weekend. Both received letters of commendation from plant manager R. A. Winkel.

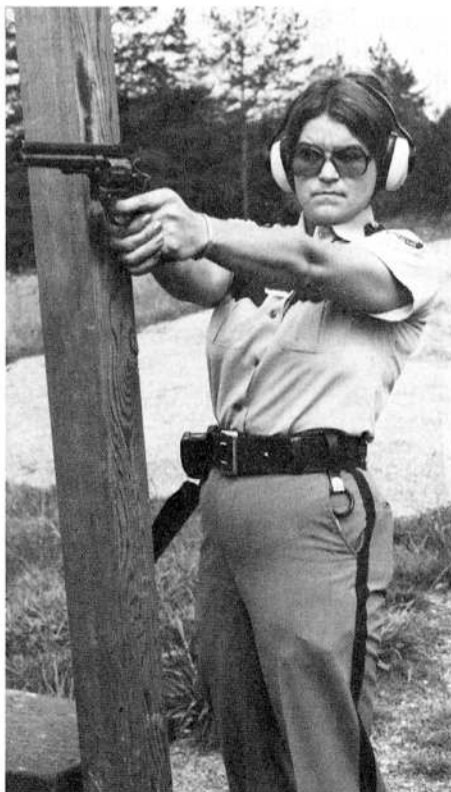
For Allen, the firearms training officer at ORGDP, the honor was a repeat performance. For Littleton, it was a new experience. It is also the first time a woman has been singled out for this distinction in Tennessee and the first time a guard has been named from the Nuclear Division.

Littleton began as a clerical worker in the ORGDP Security Department in 1969. Four years later, she had a chance to become a guard. She made the change in jobs because it was an "advancement and a chance to be on the outside."

For all practical purposes, Littleton was a novice in handling firearms. Her basic training qualified her for handling firearms, but she was not content with just qualifying. With the guidance of Allen, she began an intensive training program and practiced in tournaments through her affiliation in the East Tennessee Rangemasters Association. Most of the training and competition was on her own time.

In order to qualify for the "Governor's 20," Littleton, like Allen, had to submit five top scores from different tournaments in 1977. Three of the tournaments were local and the other two were out-of-town. The scores were certified by the National Rifle Association (NRA).

Littleton hopes to continue as a member of the "Governor's 20." She knows the competition is keen and says she is "dedicated." Her sights are high. Currently she is ranked by the



*FIRE ONE—Terri Little, ORGDP, fires a round of shots with a .38 calibre special during the "left-hand barricade" exercise which is part of the competition.*

NRA as a "marksman" with a .38 calibre special. Her goal is to reach "master."

Now that she is a member of the "Governor's 20," Littleton is eligible to participate in the "President's 100" and shoot in national competition.

## question box...

If you have questions on company policy, write the Editor, **Nuclear Division News** (or telephone your question in, either to the editor, or to your plant contact). Space limitations may require some editing, but pertinent subject matter will not be omitted. Your name will not be used, and you will be given a personal answer if you so desire.

### FEEDBACK

Many of the comments received in this column are of a negative nature. I recently visited the Y-12 Medical Department for a minor problem. From the receptionist, the nurse and attending physician, there was nothing but courteous, friendly assistance. Please see that this service department gets the thanks of a grateful employee.

### President's visit

**QUESTION:** Who selected/nominated those who attended the roundtable discussion with President Carter at ORNL? What criteria were used in the selection? Also, who assigned auditorium seating at that discussion and how?

**ANSWER:** A prioritized list of attendees was designated, under very tight time constraints, by Herman Postma. He considered such things as having alternate speakers if they were needed, having persons present who could answer questions that might be asked, past award winners and people making outstanding contributions to the Laboratory, individuals playing a key role in the success of the President's visit, etc.

An attempt to contact individuals was made Friday, over the weekend, and early Monday, the day of the President's visit. In cases of inability to contact an individual, the telephone callers continued down the priority list. The White House wished that every seat be filled but that there be

no standees; yet, they did not finalize the number of seats to be reserved for members of their party until late Sunday. Inevitably, some people could not be reached and many others on the list could not be accommodated due to the limited number of seats. The actual seating in the auditorium was Dan Robbins' responsibility with guidance from the White House.

Because Postma wanted all who wished to participate to do so as fully as possible, an arrangement was made to videotape the entire session so that these tapes could be shown later, as they have been, to Laboratory employees at ORNL and at Y-12.

### Dietary expert

**QUESTION:** A home economist has been hired by the ORNL Medical Division to assist people in counting calories and to advise on foods to help lower cholesterol. Will she be visiting the various lunch rooms throughout the area to assist those who bring lunches, etc.?

**ANSWER:** To determine the effectiveness of this type program, a nutritionist has been employed part-time by the ORNL Health Division to consult with persons who, through regular examinations, have learned of health problems that may be lessened or alleviated through a controlled diet program.

Referrals for this service are made by the medical staff for those persons needing assistance. At this time no extension of this service is planned.

## People need people. . .



*Y-12ER S VISIT DAY CARE CENTER—Seeking to know more about the United Way agencies in their area, members of this year's Y-12 Campaign team visited the Scarboro Day Care Center in Oak Ridge. Taking some time to play with some of the children are Wilbert D. Minter, materials coordinator; James B. Sykes, chairman; Norman A. O'Neal union representative; Jim W. Cox, treasurer; Malcolm Shell, publicity; George Tate, guard union head; Arthur D. Nine, solicitor training; and Yvonne Bohannon, Scarboro's teacher. Approximately 980 children have attended the Scarboro Day Care Center since it was organized in 1950.*



## Savings Plan-Personal Investment Account

|             | Fixed<br>Income Fund | UCC Stock | Equity<br>Investment Fund |
|-------------|----------------------|-----------|---------------------------|
| December 76 | 13.0553              | 59.2723   | 8.8166                    |
| December 77 | 14.2017              | 40.9096   | 8.0427                    |
| April 78    | 14.6133              | 40.4596   | 8.2159                    |
| May 78      | 14.7179              | 40.3989   | 8.3523                    |
| June 78     | 14.8230              | 39.0223   | 8.2219                    |

Note: Fixed Income Fund unit values reflect interest additions to achieve the guaranteed effective annual interest rate of 8.85% for 1978. Union Carbide stock values are the average cost of stock purchased during the month plus brokerage charges. Equity Investment Fund unit values represent the month-end market value of securities held by the Fund. The price of each unit is determined by dividing the total value of the securities by the number of units in the Fund.

## Two appointments at ORGDP

Paul E. Hollenbeck has been appointed quality assurance manager for the Separations Systems Division and Jessie W. Childs Jr. has been named cascade supervisor in the Operations Division at ORGDP.

Before joining the Nuclear Division, Hollenbeck spent 22 years with Westinghouse Electric Corporation, more recently as manager of quality assurance for the Clinch River Breeder Reactor. He is a graduate of Robert Morris College in Pennsylvania.

Hollenbeck and his wife, Jean, who is a native of Pittsburgh, live at 1717 Capistrano Drive, Knoxville, with their daughter, Paula. They are also the parents of two married daughters. Childs is a veteran of the U.S. Army.



Hollenbeck



Childs

The Harriman native joined the ORGDP in 1959.

He and his wife, Margaret, who is a secretary in the Operations Division, live at Route 2, Rockwood, with their son, Jay.

## Weisgerber, Meece promoted

Two promotions have been announced in the Plant and Equipment Division at ORNL. James D. Weisgerber was named a machine shop foreman and L. F. (Jack) Meece was promoted to sheet metal supervisor.

Weisgerber was promoted from machinist. He joined Union Carbide in 1960 at Y-12 machining.

The native Tennessean lives at 308 West Faunce Road, Oak Ridge, with his wife, Norma Jean, and their two children, Lynn and Darrell.

Before his promotion, Meece was employed as a sheet metal worker and apprentice instructor in sheet metal fabrication. The Russell Springs, Ky. native joined the Nuclear Division in 1958.

Meece has three children: Sherry, Mark and Connie. He resides at 107 Edinboro Lane, Oak Ridge.



Weisgerber



Meece

## division death...

Jerreld J. Smith, inspection supervisor in the Department of Quality Assurance and Inspection at ORNL, died July 9 in Fort Sanders Hospital.

Mr. Smith was a native Texan and served in the U.S. Army during the Korea conflict. He joined the Nuclear Division in 1956.

He is survived by his wife, Mary; his mother, Mrs. Lillie Farmer; two sons, Thomas and Bruce; a grandson, four sisters and three brothers.

Graveside services were held in Highland Memorial Cemetery, Knoxville.



Mr. Smith

## Summer Series

The ORNL Summer Seminar Series will continue Tuesday, July 25, with a lecture by Lee A. Berry at 3 p.m. in the East Auditorium, Building 4500 North.

Berry, director of the Nuclear Division's Fusion Program, will address the topic of "Fusion Power."

On the following Tuesday, August 1, Eric A. Hirst will host the fifth of six lectures in the Summer Seminar Series. Hirst, a research engineer with the Energy Division, will speak on "Residential Energy Use, Conservation and Economics." This seminar will also be held in the East Auditorium, Building 4500 North, at 3 p.m.

The ORNL Summer Seminar Series began in the mid-70's as a program of summer lectures for visitors, summer employees and regular staff. Yvonne Lovely, Information Division, coordinates this program.

## Boch named to Fusion post

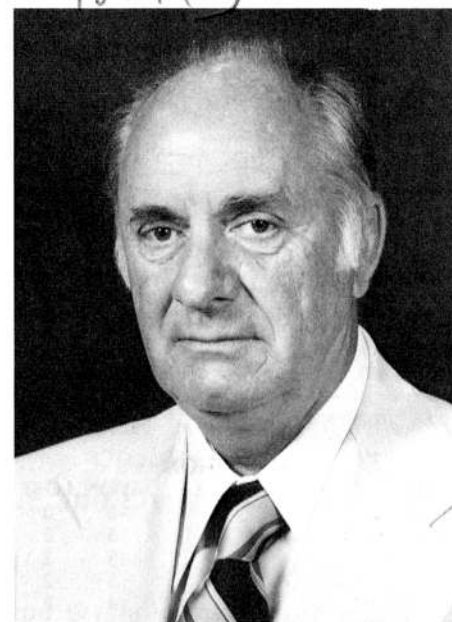
Alfred L. Boch has been named project manager for the proposed EBT-II facility in ORNL's Fusion Energy Division, division director O. B. Morgan announced.

Boch, whose most recent assignment has been manager of facility projects in the Office of Waste Isolation, will be responsible for the planning, engineering design and eventual construction of the facility.

EBT-II will be an advanced fusion experiment based on the concept of Fusion Energy Division's ELMO Bumpy Torus (EBT), a device that originated at ORNL and is a leading alternative to the widely accepted tokamak design for fusion devices. The project, which is awaiting review by DOE's Office of Fusion Energy pending final results from current EBT experiments, would be "a very significant step in the development of an alternate fusion concept to tokamaks and magnetic mirrors," Morgan said.

Boch came to Oak Ridge in 1943 with the Tennessee Eastman Corporation. His early work included calutron process development and the construction of cyclotrons, including the 86-inch cyclotron that is still operating in the Y-12 Plant, providing medical and special industrial isotopes.

Later he served as assistant director of ORNL's Electronuclear Research Division and then as associate director of the Reactor (now Engineering Technology) Division.



Alfred L. Boch

He was project engineer for the Molten Salt Reactor Experiment and project director for the High Flux Isotope Reactor, the Oak Ridge Electron Linear Accelerator, and the Salt Mine Repository Project. He was responsible for establishing ORNL's Quality Assurance Program and served as director of ORNL's Capital Projects organization.

Boch is a registered engineer in the state of Tennessee and a 20-year member of the American Nuclear Society. He and his wife, Lela, live at 1020 Crooked Springs Road, Knoxville.

## about people



Grell



Smith



McHargue

Rhoda Grell, a geneticist in ORNL's Biology Division, was inducted into the Hunter College Hall of Fame in a recent ceremony at the Americana Hotel in New York City. Inductees to the Hall of Fame are chosen each year from outstanding graduates of Hunter College, part of the City University of New York system. Grell was selected specifically on the basis of her professional accomplishments in the field of genetics.

Grell came to ORNL in 1958 and received her Ph.D. degree in genetics in 1961 from the University of Tennessee, where she holds a concurrent appointment as a Ford Foundation Professor in the Department of Zoology. Her professional memberships include Sigma Xi, the Genetics Society and the Society of American Naturalists. She and her husband, Ellsworth (also a Biology Division geneticist), live at 107 Windham Road, Oak Ridge.

James H. Smith, an engineer in Metals and Ceramics, has been elected a Fellow of the American Society for Nondestructive Testing (ASNT). ASNT Fellows must have contributed to the "advancement of nondestructive testing and evaluation in areas such as management, engineering, science, education, administration or planning."

Smith joined Union Carbide in 1962 as a physicist at the Y-12 Plant, later transferring to ORGDP and to ORNL in 1975. He is past chairman of the local ASNT section and a member of the American Welding Society and the Society for Experimental Stress Analysis.

Carl J. McHargue, ORNL's Metals and Ceramics Division, was elected a Fellow of the Metallurgical Society of the American Institute of Mining, Metallurgical and Petroleum Engineers for his contributions to the metallurgical arts and sciences. No more than five Fellows are elected each year, and the maximum number of living Fellows cannot exceed 100.

McHargue joined M&C in 1953 and serves as manager of both the materials science section and the basic energy sciences programs in materials science. He also serves as an appointed lecturer and professor of metallurgical engineering at the University of Tennessee.



# recreationotes . . .

The longest winning streak in Carbide's slow pitch history came to an end recently as the mighty Snakes went down in defeat. . .13 to 4 in the

Atomic League. They were victims of the Lasers, as their 53-game winning streak came to a halt.

League standings follow:

| NORTH DIVISION     |     |      |
|--------------------|-----|------|
| TEAM               | WON | LOST |
| Snakes             | 4   | 1    |
| War Hogs           | 6   | 2    |
| Prime Time Players | 5   | 2    |
| Lasers             | 5   | 2    |
| Supersonics        | 5   | 3    |
| ESD YoYo's         | 4   | 3    |
| Over-The Hill-Gang | 4   | 3    |
| Barrier Clowns     | 3   | 4    |
| Bad News Barriers  | 2   | 3    |
| Short Circuits     | 3   | 5    |
| Bio-Rejects        | 2   | 4    |
| Onagers            | 1   | 5    |
| Gross Encounters   | 0   | 7    |

| EAST DIVISION       |     |      |
|---------------------|-----|------|
| TEAM                | WON | LOST |
| Streakers           | 6   | 0    |
| Forty-Niners        | 5   | 2    |
| Fed's II            | 5   | 2    |
| Howie's Scooby-Doos | 5   | 2    |
| Coneheads           | 4   | 2    |
| Luda Loptas         | 4   | 2    |
| Mother's Sluggers   | 4   | 2    |
| Fed's I             | 5   | 3    |
| Tom's Turkeys       | 5   | 3    |
| Paperback Riders    | 4   | 3    |
| Crippled Turkeys    | 2   | 4    |
| Gauss House Gang    | 2   | 4    |
| Uptowners           | 2   | 4    |
| Odds 'n Ends        | 2   | 5    |
| Skinks              | 1   | 6    |
| Critters            | 1   | 6    |
| Spastics            | 0   | 6    |

| WEST DIVISION        |     |      |
|----------------------|-----|------|
| TEAM                 | WON | LOST |
| Fes-Kids             | 7   | 0    |
| Killer Bees          | 9   | 1    |
| Bear Creek All Stars | 8   | 1    |
| Knockers             | 7   | 2    |
| Softball Team        | 7   | 3    |
| Fly Swatters         | 6   | 3    |
| Master Batters       | 6   | 3    |
| Pits                 | 4   | 4    |
| Bombers              | 4   | 4    |
| Wild Turkeys         | 4   | 5    |
| Quads                | 2   | 5    |
| Stonefingers         | 2   | 6    |
| Nit-Wits             | 2   | 6    |
| Rhythm & Blues       | 2   | 6    |
| Spitballs            | 1   | 7    |
| Brinks               | 0   | 6    |
| Lynch Mob            | 0   | 8    |

| SOUTH DIVISION        |     |      |
|-----------------------|-----|------|
| TEAM                  | WON | LOST |
| Shifters              | 9   | 0    |
| Hawgs                 | 7   | 1    |
| B.T. Express          | 5   | 3    |
| Gas-House Gang        | 5   | 3    |
| Apeats                | 5   | 3    |
| The A's               | 4   | 3    |
| ESD Pits              | 4   | 3    |
| Bruins                | 3   | 4    |
| Thunderdogs           | 2   | 4    |
| Electric Bananas      | 3   | 6    |
| Streaking Stokers     | 2   | 5    |
| Artie's Army          | 2   | 6    |
| Old Ruff & Ready Gang | 0   | 8    |

## wanted...

### Y-12 PLANT

RIDERS FOR VAN POOL from Rockwood to Portals 2 and 4, straight days. Terrence Brewster, phone 3-5445, home 354-1615.

Would you like to take home more of your pay check by car pooling? C Shift, from Powell, Claxton areas. Jim Melton, plant phone 3-3367, home phone Claxton 945-3359.

JOIN CAR POOL from Papermill Road area, Knoxville, to East Portal, 8:15-4:45. Dalton Atkins, plant phone 3-1830, home phone 584-3766.

### ORNL

VAN POOL RIDERS from West Knoxville, I-40, Papermill Road exit area, 8:15-4:45. Ray Pearson, plant phone 3-1805, home phone 588-9949.

### ORGDP

RIDE or JOIN CAR POOL from Farragut, to Portal 3, 8-4:30. Don Muldrew, plant phone 3-3421, home phone 966-8306.

## division deaths...



Mr. Browder

Frank N. Browder, a development staff member in ORNL's Chemical Technology Division, died July 7.

Mr. Browder was a member of the American Chemical Society. He joined Union Carbide in 1947.

Immediate survivors include his wife, Dolores; sons, Douglas and Donald; and a sister, Julia.

Services were held at the Church Street United Methodist Church with burial at Highland Memorial Cemetery, Knoxville.

Willis K. Prater, a Chemical Technology Division development staff member at ORNL, died July 9 in Knoxville's Baptist Hospital.

A graduate of Carson-Newman College, Mr. Prater served with the U.S. Army Air Force during World War II and joined Union Carbide in 1946.

He is survived by his wife, Kathryn; three daughters, Lynn, Mardi and Trudi; a son, William; sister, Zola; and four grandchildren.

Services were held in Concord Presbyterian Church, with burial in Knoxville Memorial Park.



Mr. Prater

## patent granted...

To Charlene C. Edwards, Ronald L. Swain and Cressie E. Holcombe Jr., all of the Y-12 Plant, for "Adhesive Plasters."



Up, up and away!



Needle in a haystack



The 'volleyball hustle'

## A slide

More than 1,000 persons Division annual picnic held. This picnic commemorated Washington's call-to-duty.

Shortly after assuming command on June 15, 1775, Washington labored under "A Want of Works and direct the Men, colonial leaders since America for immediate military needs requirements of a civilian population.

From Washington's initial the United States has grown 295,000 graduate and undergraduate on a full-time basis and an time at 289 institutions. The in engineering technology



# rule picnic

participated in the Engineering at Clark Center Recreation Park. the 200th celebration of George of our nation's engineers. Command of the Continental forces on advised Congress that the Army Engineers to construct proper His concern was shared by many ica required engineers, not only s, but also to meet the future population. ive, engineering education in until today there are almost graduate students studying engineering additional 47,000 studying part- re are also 78,000 students enrolled programs.



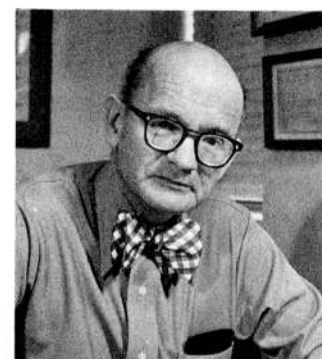
Look out below!



Light at the end?

## Keeping in rhythm on a rotating shift

by T. A. Lincoln, M.D.



(Editor's Note: Dr. Lincoln alternates his regular column with "The Medicine Chest," where he answers questions from employees concerning health in general. Questions are handled in strict confidence, as they are handled in our Question Box. Just address your question to "Medicine Chest," NUCLEAR DIVISION NEWS, Building 9704-2, Stop 20, Y-12, or call the news editor in your plant, and give him or her your question on the telephone.)

**QUESTION:** "How come some people have so much trouble adjusting to a rotating shift and others like it?"

**ANSWER:** There is a daily rhythm to almost all body functions. Body temperature, blood pressure, flow of urine and others approximate a 24-hour pattern called a circadian rhythm. (Circadian comes from the Latin *circa dies*, which means "about a day.") The rhythm is based on sleeping and eating patterns as well as environmental influences such as light-dark cycles or changes in temperature. Rotating shifts require a continuing change in these circadian rhythms.

*'...it takes awhile for a new rhythm to get established.'*

When a body rhythm is interrupted, it takes awhile for a new rhythm to get established. A good example is the sleep pattern which gets interrupted when a person travels by airplane from the Eastern Time Zone to the Pacific Time Zone. The three-hour difference is most noticeable when the easterner wakes up at 4 a.m. rather than 7 a.m. the next morning after he arrives on the West Coast.

Most rhythms can be reestablished in a few days, but some require longer than the usual shift period. One could easily ask, "why not rotate shifts every two weeks or every month, so enough time would be available for all rhythms to adjust?" It is probable that physiological adjustment could be achieved on a longer schedule, but many workers and their families would have problems meeting other personal and social responsibilities.

Adjustment to a rotating shift often depends on how easily the home environment can be controlled. If it is difficult to have a dark, quiet and cool room in which to sleep during the day, tolerating the night shift can be difficult. When the family rigidly demands that the worker try to stay as close to their schedule as possible and allows inadequate time for sleep, severe problems can occur. A flexible family and worker usually adjust reasonably well.

It has been found that "morning" people (those who wake up "bright-eyed and bushy-tailed") have greater difficulty adjusting to a rotating shift than "night" people (those who don't really get going until after dark). Some people are just physiologically

and psychologically more adaptable than others.

Although there are about 16 million persons in the United States who work and live within some type of shift scheduling, few unique disease patterns have been detected. Insulin dependent diabetics have great difficulty adjusting to rotating shift work. Patients with high blood pressure which is difficult to control sometimes have problems, as do patients with active peptic ulcers. Individuals who are moody and subject to spells of depression adjust poorly to shift work. Some medications change their effectiveness when taken on a frequently changing schedule.

In general, work performance and alertness are related to body temperature. When the temperature is low, which is usually at night, performance is poorest. Alertness is best during the early part of the individual shift, but overall performance often improves toward the end of the shift when adjustment has occurred. The sleep period is most effective when it occurs before going to work. Some people are able to use a split sleep schedule, especially when working the night shift. The largest meal should generally be eaten after waking and before going to work.

*'...more study of workers on rotating shifts is needed.'*

Much more study of workers on rotating shifts needs to be done. Enough is known, however, about altered physiology during disturbed circadian rhythms, that special studies could be performed on individuals who seem to have great difficulty in adjusting. When a fundamental physiological maladaptation is detected, the only solution may be finding straight day work.

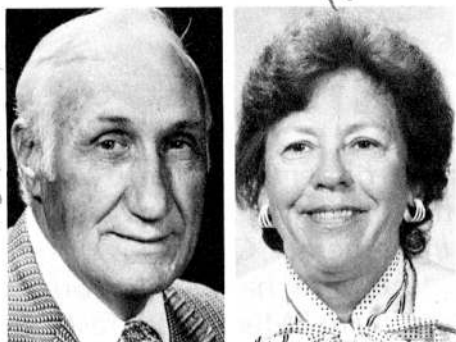
The rotating shift being used in most locations is necessary to make efficient use of facilities. Most people prefer the weekly change with the long break. It is a compromise which allows best adaptation to a family's needs. In some locations, permanent shifts in the later afternoon or night are necessary. Most people who make an effort to adjust, gradually succeed. Some eventually prefer rotation so as to have more daytime hours off. Some just can't make it. They may have to seek another type of work. There are no easy solutions.



# anniversaries ...

## Y-12 PLANT

35 YEARS



Cavasos

Harris

**Elmer E. Cavasos**, Y-12 Engineering, is a native of Cleburne, Tex. He joined Union Carbide July 23, 1943, after serving in the U.S. Marine Corps. He lives at 1042 Artella Lane, Knoxville.

**Elizabeth Y. Harris**, a native of Mantachie, Miss., is in Y-12's Engineering Division. Her husband, C. E. "Fuzz" Harris was a well-known Y-12er in Research Services. He died in 1976. Harris lives on Sonja Drive in Concord.

30 YEARS

James H. Copeland Jr., Utilities Administration; Harold R. Bailey, Electrical and Electronics; James E. Miner, Development Division; William P. Smith, Engineering Division; and Edna M. Buchanan, Beta 2 Chemistry.

25 YEARS

Richard R. Williams, Robert L. Habermas and Daniel L. Morgan.

## PADUCAH

35 YEARS



Weglicki

Smith

**Harry S. Weglicki**, Paducah Shift Superintendents, is a graduate of Niagara University and a native of Niagara Falls, N.Y. He joined Union Carbide in 1945, Cascade Operations at ORGDP following work begun in 1943 at Columbia University in the S.A.M. Labs. He formerly held positions in Finance and Materials and Cascade Operations at Paducah. He and his wife, Irene, reside on Mimosa Lane, Paducah. They have three children, Michael, John and Elizabeth.

**Robert F. Smith**, Paducah Technical Services Division, began work at the Columbia S.A.M. Labs in 1943 and later accepted positions in spectrometer work at ORGDP. He is a graduate of Morehead State University and a native of West Liberty, Ky. He is a charter member of the American Society for Mass Spectrometry and served as president of the Paducah Plant Credit Union for eight years. He and his wife, Mae, reside on Holt Road, Paducah.

25 YEARS

Robert E. Grant Jr., Lennis B. Robertson, James D. Garrison, Frank T. Wiggins and Prentis Moore.

20 YEARS

William F. Thomas and Clovis R. Copeland Jr.

## ORGDP

35 YEARS



Fritts

**King Coolidge Fritts**, general supervisor in the Maintenance Division at ORGDP, first went to work at Y-12 where he spent 32 years. He was a supervisor in the Maintenance

Division before transferring to ORGDP three years ago.

The Kingston, Tenn., native and his wife, Dorothy, live at Route 6, Harriman. The Fritts are the parents of four children.

30 YEARS

Ida M. Roper, Fabrication and Maintenance; James P. Love, Separations Systems.

25 YEARS

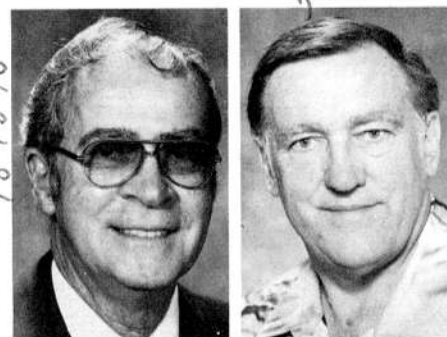
Floyd K. Shook and David E. Cardwell Jr.

20 YEARS

Joseph A. Robinson.

## ORNL

35 YEARS



Penland

Rimshaw



Stair

Stooksbury

**Henry E. Penland**, senior engineering assistant, Engineering Technology Division, joined the Manhattan Project in 1943 as a Tennessee Eastman employee. He has been with his present division, formerly the Reactor Division, since 1955.

The native Texan is a member of the American Society of Certified Engineering Technicians and the Institute for the Certification of Engineering Technicians.

Penland and his wife, Faye, live in Knoxville. They have a daughter, Patricia.

**Stanley J. Rimshaw**, Operations Division development chemist, came from Cambridge, Mass., to join Clinton Laboratories' Manhattan Project in 1943.

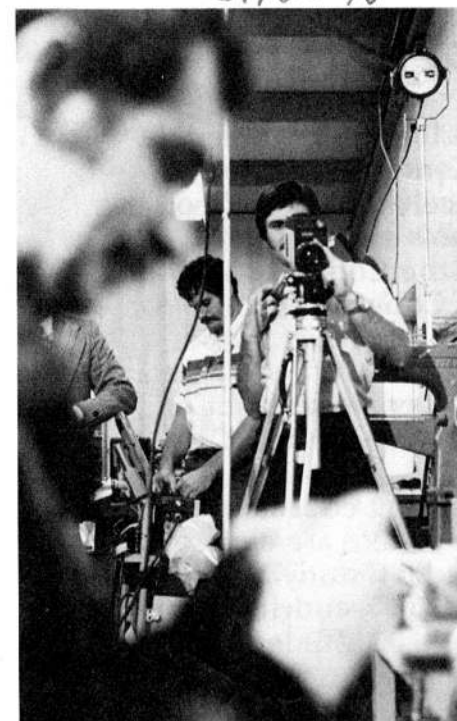
After spending a year working with the Hanford process pilot plant, Rimshaw joined the Isotopes (now Operations) Division in 1946. Rimshaw has worked in the production and development of most radioisotopes at Union Carbide and has been involved with the Fission Products Development Laboratory.

He and his wife, Hulon, live in Loudon. The Rimshaws have three children: Frank, Mary and Ann.

**Mary Margaret Stooksbury**, a secretary in the Operations Division, joined Tennessee Eastman at the Y-12 Plant on August 3, 1943. She transferred to ORGDP in 1954 and then to ORNL in 1956. Stooksbury was secretary to the director of the

## Lights, camera, action!

3110-78



The crew of the Nuclear Division's Color Television Center is already hard at work taping segments for this year's United Way Campaign videotape. Shown taping some footage at the Community Services for Exceptional Citizens in Oak Ridge are Michael Shepherd, at the camera, and Chuck Jones, at the controls. The videotape, which will highlight 11 area agencies, will be shown initially at the United Way "Kickoff Meeting" on September 15.

## NUCLEAR DIVISION NEWS

UNION CARBIDE CORPORATION  
NUCLEAR DIVISION  
Office  
Post Office Box Y  
Oak Ridge, Tenn. 37830

### EDITOR

James A. Young, Ext. 3-7100

### ASSOCIATE EDITOR

Karen L. Cromer, Ext. 3-6266

### ORGDP

Ira. N. Kaplan, Ext. 3-9724

### PADUCAH

Darlene McPherson, Bell 208

Member,  
**UNION CARBIDE**  
INTERNATIONAL  
ASSOCIATION  
OF BUSINESS  
COMMUNICATORS



**TOURNAMENT VICTORS**—Winners in Paducah's Carbide Open Golf Tournament show off their victory spoils following the 18-hole battle of the Village Green. Back from left are Dan Garrott, J. B. Sims, Marty Curtis, Ed Bazzell, Jim Ballard, Mike Flood, J. W. Harbison and Bob Moss. Front from left are Darlene McPherson, Donna Curtis, JoAnn Longton, Byron Foust and Jan McEly. The next plant golf scramble is scheduled for August 12 at Paxton Park.





ORNL UNITED WAY TEAM—works out its strategy for the 1978 campaign. Clockwise from lower left are: Stanley I. Auerbach, ORNL chairman; Virginia Lee, secretary; George Joseph solicitor training; Tracy Vann, assistant treasurer; Barbara K. Lyon, publicity; Ada Mizek, treasurer; and Robert E. Canning, materials coordinator. Not present for the photograph was William Fulkerson, associate chairman and 1979 chairman-delegate.

## Promotions told at Y-12 Plant

Three promotions have been announced at the Y-12 Plant. Henry W. Dickenson has been named a machining supervisor in Fabrication; Geneva A. Nelson has been named a programmer in Computer Sciences; and Thomas B. Reed has been promoted to a machining supervisor in Fabrication also.

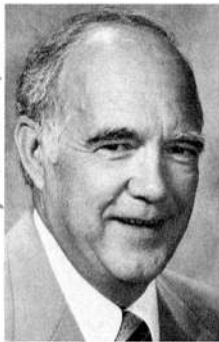
Dickenson, a native of Appalachia, Va., joined Union Carbide in 1959 after working as a machinist with Southern Railroads, Sawyer Manufacturing and Winter Garden.

Married to the former Norma June Yeatts, he lives at 4426 Felty Drive, Knoxville. The Dickensons have two sons, Scott and Gene; and two daughters, Sheri and Tami.

Nelson holds a BA in mathematics from the University of Tennessee and did pre-college studies at Cambridge University, England. A native of Greenville, S.C., she joined Union Carbide a year ago.

Nelson, a member of the Data Processing Management Association, lives at 1725 Kim Watt Drive, Knoxville.

Reed, a native of Blount County joined Union Carbide in 1954 after working as a machinist at Rockford



Reed



Nelson



Dickenson

Manufacturing and General Motors. He is a graduate of Star Tech Vocational School, Knoxville.

Married to the former Genevive Ross, Reed lives at 25 Jolly Lane, Route 17, Knoxville. The Reeds have two daughters, Gloria and Joyce.

### Y-12 PLANT

CAR POOL MEMBER from Wartburg to Central Portal, straight day. Vicky Keyes, plant phone 3-5101, home phone Wartburg 346-3210.

RIDE or WILL JOIN CAR POOL from East Village, Amherst Lane, Oak Ridge, to North Portal, straight day. Angie Puckett, plant phone 3-5453, home phone Oak Ridge 483-7116.

VAN POOL RIDERS from Farragut, Concord areas, to Bear Creek Portals, straight day. Ed Abercrombie, plant phone 3-5719, home phone 637-0720.

John H. Moore has been promoted to supervisor in the Radioisotope Production Department, ORNL Operations Division.

Moore joined Union Carbide in 1951 as a member of ORGDP's guard force. He worked as a chemical operator at ORGDP from 1953 to 1958 before joining the Laboratory to continue working as a chemical operator. Before his promotion, Moore was a senior laboratory technician.

A native Tennessean, he and his wife, Cleta, live on Lakeshore Drive, Kingston. The Moores have three children: John, Virginia and James.

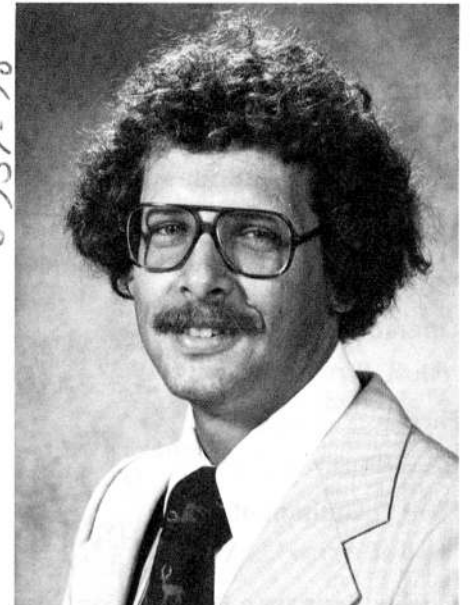
## Durfee honored by TSPE as young engineer of year

Norman W. Durfee, a civic engineer at ORNL, received the "Young Engineer of the Year Award" at the annual meeting of the Tennessee Society of Professional Engineers (TSPE) in Nashville recently.

He was selected as the young engineer in Tennessee who has done most to enhance the stature of the professional engineer, to attain the goals of TSPE and who has shown growth in both the professional and technical aspects of engineering.

Durfee graduated from the University of Tennessee in 1967 with a BS in civil engineering, and returned to earn an MS in engineering administration in 1975. He is currently a section head in Project Engineering. While still a student at UT, he worked as a draftsman for Campbell Wallace Consulting Engineers.

Durfee is president-elect for 1978-79 of the Oak Ridge Chapter of TSPE, and is also a member of the American



Norman W. Durfee

Society of Civil Engineers, the National Society of Professional Engineers and state chairman of Professional Engineers in Industry.

## People need people. . . 3111-78



SHE BELIEVES IN THE UNITED WAY—Yvonne Callahan, an editor in ORNL's Technical Publications Department, is also a member of the board of directors for Youth Haven, Inc., in Oak Ridge. Youth Haven, an Anderson County United Way Agency, provides a temporary home and counseling for youths under 18 who have suffered interruption of their normal family environment. Callahan is shown with one of the children from Youth Haven. **\*\*\***

wanted...

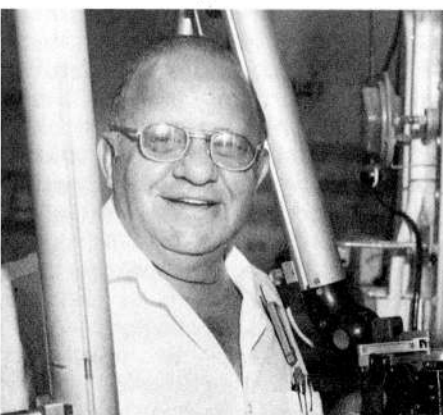


### ORGDP

RIDE or JOIN CAR POOL from Farragut, to Portal 3, 8-4:30. Don Muldrew, plant phone 3-3421, home phone 966-8306.

RIDE or JOIN CAR POOL from Walker Springs Rd. to Portal 3, 7:45-4:15. Julia Schelly, plant phone 3-3202, home phone 690-5284.

## Moore promoted





## Blood drive August 2

(Continued from page 1)

### Laboratory Protection

Robert L. Atchley  
Ext. 3-6277

### Metals & Ceramics

William H. Miller Jr.  
Ext. 3-1929  
Rodney W. Knight  
Ext. 3-1565

### Neutron Physics & ORELA

George T. Chapman  
Ext. 3-1215

### Operations

John M. Miller  
Ext. 3-1672

### Physics

Ronald L. Auble  
Ext. 3-1612

### Plant & Equipment

Rasho H. Winget  
Ext. 3-1516

### Quality Assurance & Inspection

J. J. Smith  
Ext. 3-6884  
Ronald G. Pope  
Ext. 3-1523

### Solid State

James T. Howe  
Ext. 3-6281

### CARBIDE NIGHT AT SOX GAME...

The Knoxville Sox will have a special night for Carbide employees and family, (your badge will be I.D.), on Wednesday, July 26, 1978. Game time will be 7:30 p.m. at Bill Meyer Stadium. The Knoxville Sox will be playing the Orlando Twins. Employees will be admitted for half price. . \$1.00-Adults 50¢-children.

People who cannot give blood include diabetics who are using insulin, persons with a history of heart disease, persons with epilepsy, pregnant women, sufferers of chronic kidney diseases, or persons with a history of cancer. You must weigh at least 110 pounds and have no history of jaundice or hepatitis. High or low blood pressure (which is checked on the spot) would automatically exclude you also.

The American Red Cross began blood drives during World War II to supply hospitals on the fronts with vital blood needed to save the lives of servicemen. Today, more than 52 percent of the nation's entire blood needs are supplied through Red Cross chapters in this country.

Blood reserves have been dangerously low in the area and throughout the nation lately. Last year, between the Christmas and New Year's holidays, the shelves at the Nashville Regional Center were completely depleted and an emergency drive was held in Davidson County to relieve the critical situation.

Even though coverage for the August drive will ensure every ORNL staff member and his/her family of blood coverage, the units collected will go toward helping Oak Ridge meet its increased quota for 1978-1979.

Contact your divisional coordinator now. See that your name gets on the honored roll of blood donors!

## safety scoreboard

Time worked without a lost-time accident through April 20:

|                  |          |                     |
|------------------|----------|---------------------|
| Paducah .....    | 272 Days | 3,395,928 Man-Hours |
| ORGDP .....      | 14 Days  | 498,200 Man-Hours   |
| Y-12 Plant ..... | 8 Days   | 226,000 Man-Hours   |
| ORNL .....       | 95 Days  | 2,203,346 Man-Hours |



Norman L. Beeler



Grover C. Cain

## Beeler, Cain endorsements

Norman L. Beeler, president of the Atomic Trades and Labor Council, is acting as co-chairman for the Blood Drive.

"Endorsing the blood drive is a privilege, as it will assure coverage for every employee and his family," Beeler said. "Blood is something we never know when we will need, and it's assuring to know that if the occasion ever arises, it will be there."

The Grainger County (Tenn.) native, joined the Laboratory in 1945, and has been active in the ATLC since its beginning, holding offices since 1961. He has served as president since 1975.

Active in civic affairs, Beeler is on the board of directors of the Anderson County Mental Health Association, and also serves on the board of the local United Way. He is in ORNL's Plant and Equipment Division.

Beeler and his wife, Ann, live at 695 Robertsville Road, Oak Ridge.

"Trade unions all over the country support the Red Cross's efforts to provide blood for all people. We at ATLC are happy to lend our support to this cause," Beeler concluded.

"Giving blood assures that it will be available when and where it is needed," says Grover C. Cain, co-chairman for the current Blood Drive at ORNL. "It's not a matter of money. It's a matter of availability. It's that simple."

The 32-year veteran at ORNL is coordinator for shift superintendents in the Special Services Department of Central Management Offices. A native of Knoxville and a graduate of the University of Tennessee, Cain came to the Laboratory in 1946, shortly after his graduation.

He and his wife, Flossie, live at 430 Broome Road. Their son, Barry, is attending UT.

Scheduling donors will be the big problem, according to Cain. "This is our first experience with in-plant blood donations," he said, "and we will need as many pre-registered as possible. I urge everyone to contact their divisional representative so that a time can be assigned for the donation."

"After you take away the humanitarianism, which is actually the highlight of blood programs, there's the selfish angle, too," Cain said. "Giving blood will mean that every Lab employee and his/her family is covered regardless of residence, or where the blood is used. A lot of open-heart surgery is being done at Vanderbilt and in Birmingham, but that's no problem. The Red Cross is well known for its responsibilities for blood."

## Next issue...

The next issue will be dated August 3. The deadline is July 26.



**TUMOR VIRUSES STUDIED**—Lois Wood of ORNL's Biology Division prepares cell cultures for transfer within a biological safety cabinet. The cultures—colonies of microorganisms—will be used to analyze and evaluate the effects of carcinogens and tumor-causing viruses. Researchers involved in ORNL's viral carcinogenesis program are working to understand the mechanisms by which chemical and other factors induce tumor viruses in the cells of some species.



### UNION CARBIDE CORPORATION

NUCLEAR DIVISION

P. O. BOX Y, OAK RIDGE, TENNESSEE 37830

ADDRESS CORRECTION REQUESTED

BULK RATE  
U.S. Postage  
PAID  
Union Carbide  
Corporation